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(19)



## (54) AEROSOL COMPOSITIONS

(71) I, VOLKER FRITZ WILLY GILDE-  
 MEISTER of 25 Wyche Road, Malvern, Worcs.,  
 a British subject, do hereby declare the  
 invention, for which I pray that a patent may  
 be granted to me, and the method by which it  
 is to be performed, to be particularly described  
 in and by the following statement:—

The present invention relates to an anti-  
 smoking appliance.

In accordance with the invention there is  
 provided an anti-smoking appliance comprising  
 an aerosol dispenser containing a solution or  
 dispersion of nicotine or a physiologically  
 acceptable acid addition salt thereof (and no  
 other alkaloid) and an essential oil or extract  
 thereof in an aerosol propellant vehicle.

The aerosol dispenser is preferably fitted  
 with a metering valve which delivers a fixed  
 dose of the dispersion at each operation and  
 can if desired include a device for directing the  
 spray from the spray nozzle of the dispenser  
 towards the mouth of the user. In each dose of  
 the dispersion the amount of nicotine is  
 desirably in the range of from 0.1 to 10  
 milligrams. Appropriate kinds of aerosol  
 dispenser are known and have been used  
 previously, for example, for administration of  
 broncho-dilators in the treatment of asthma.

The nicotine may be present as such or may  
 be in the form of a physiologically acceptable  
 acid addition salt such as the dihydrochloride,  
 salicylate, sulphate, or bitartrate. It is usually  
 present in the dispersion in an amount of up to  
 0.2 per cent by weight. An alcohol such as  
 ethanol, n-propanol, iso-propanol or ethylene  
 glycol which is miscible with the propellant is  
 usually present to dissolve the nicotine and  
 render the dispersion uniform. An essential oil  
 is present to impart an acceptable flavour to the  
 solution or dispersion and to counteract the  
 searing taste of any alcohol present; suitable  
 essential oils include menthol and peppermint  
 oil. A surprising and desirable modification to  
 the flavour of the composition may be  
 produced by further incorporation therein of

glycerol and/or an artificial sweetener such as  
 saccharin. Suitable propellants include chloro-  
 fluorinated methanes and ethanes having appro-  
 priate boiling points. The composition may  
 additionally comprise an anti-oxidant or  
 preservative.

The appliance preferably delivers a dose of  
 about 0.1 mg. of nicotine in each operation in  
 the form of a spray for inhalation by the user.  
 The nicotine in the spray acts as a substitute for  
 the nicotine which the user would normally  
 obtain from cigarette smoke. The user therefore  
 has to overcome only his psychological reasons  
 for smoking, and is not further provoked by his  
 physiological craving for nicotine. In addition,  
 use of the appliance provides a distraction for  
 the user which can to some extent replace the  
 physical actions involved in smoking a cigarette.  
 The dose of nicotine delivered at each  
 operation may, if desired, be increased or  
 reduced appropriately from the quoted figure.

The appliance will normally be used relative-  
 ly frequently during an initial period, but after  
 about 7 to 10 days use will become less  
 frequent and can be discontinued after an  
 appropriate period, generally about 21 days.

The invention is illustrated by the following  
 Examples:—

*Example 1*

An aerosol dispenser was filled with the  
 following composition (parts by weight):

Nicotine	0.20
Menthol	0.10
Absolute ethanol	49.70
Propellant (a mixture of "Freon" 12 and "Freon" 114 in a weight ratio 40:60)	50.00

The dispenser delivered an appropriate dose  
 of nicotine at each operation in the form of a  
 spray for inhalation by a smoker. The flavour  
 properties of the above composition were sur-  
 prisingly more acceptable than those of a  
 similar composition in which the menthol was  
 omitted. (The word "Freon" is a Registered  
 Trade Mark).

*Example 2*

A base composition was formed by mixing together the following ingredients (parts by weight)

5	Nicotine	0.67
	Methol	3.00
	Glycerol	1.00
	Abs. ethanol	1.00
	Saccharin	0.20

10 An aerosol dispenser was filled with 7.5 gm. of the base composition and 17.5 gm. of "Freon" 12. The dispenser was equipped with a metering valve which delivered at each operation a 100 mg. aliquot of the resulting composition. The resulting aerosol spray has on administration an acceptable flavour, whereas a similar composition in which the glycerine and saccharin are absent has an unpleasant searing taste.

20 I am aware of the Poisons Rules 1972 (1972 S.I. No. 1939) which relate *inter alia* to the sale of compositions containing nicotine, and I make no claim to the use of the invention in contravention to the said Rules.

25 Subject to the foregoing disclaimer,  
WHAT I CLAIM IS:

1. An anti-smoking appliance comprising

an aerosol dispenser containing a solution or dispersion of nicotine or a physiologically acceptable acid addition salt thereof (and no other alkaloid) and an essential oil or an extract thereof in an aerosol propellant vehicle.

2. An appliance according to claim 1 which is fitted with a metering valve which delivers a fixed dose of the solution or dispersion at each operation.

3. An appliance according to claim 2 which is fitted with a metering valve which delivers a dose of the solution or dispersion containing about 0.1 mg. of nicotine.

4. An appliance according to claim 1, 2 or 3, wherein the essential oil extract in the solution or dispersion is menthol.

5. An appliance according to any preceding claim wherein the solution or dispersion additionally comprises glycerol and/or an artificial sweetener.

6. An appliance according to claim 1 substantially as hereinbefore described in Example 1 or in Example 2.

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